Sur (23°5′N, 109°35′W) (LACM 66-18.2), south to Isla del Cano, Puntarenas Province, Costa Rica (8°43′15″N, 83°53′7″W) (LACM 72-63.3); from the intertidal zone to 42 m (mean, 16 m), among sand or rubble. I examined 19 Recent lots, including the type specimens. It has been recorded from a late Pleistocene terrace on Santa Barbara Island (Lipps *et al.*, 1968:297, 299, as "*aff. G. californica*").

Discussion: Material from the Panamic province, for which the name *Grippina berryana* was proposed, differs from Californian material only in its smaller size (maximum length 2.3 mm) and narrower posterior slope that is less well defined by radial ridges. Additional sampling will probably fill in the distribution from Isla Cedros to the Gulf of California.

A NEW ZEALAND SPECIES

I have recently learned that *Mysella aupouria* Powell (1937: 172–173; pl. 47, fig. 5) is a *Grippina* (P. A. Maxwell, in correspondence, 1 Dec. 1989). It is more elongate and longer posteriorly than the eastern Pacific species of this genus.

It is possible that additional taxa that have been assigned to *Mysella* will prove to belong to *Grippina*.

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THE VELIGER

The Molluscan Publications and Taxa of Lorenzo Gordin Yates (1837–1909)

by

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Abstract. Lorenzo Gordin Yates (1837–1909) was an early amateur naturalist in California, who had a particular interest in malacology. He introduced seven new names for mollusks, of which five are currently regarded as valid. Type material is extant for four of the six species-group taxa.

INTRODUCTION

Lorenzo Gordin Yates was an early Californian naturalist, whose interests covered many fields (Figure 1). His life and contributions were discussed by CAMP (1963a, b) and PILSBRY (1909), and only brief biographical information is given here. The purpose of the present article is to provide a bibliography of his publications in malacology and a listing of the molluscan taxa he made available in them, as well as information about their types and current taxonomic status.

Yates was born on 8 January 1837, in Eastchurch on the Isle of Sheppey, which is in the mouth of the Thames River in England.[1] The son of Richard Owen and Rosetta Mary (Chambers) Yates, he spent his first nine years on that isle, where he began making collections, particularly Eocene fossils, constructing mechanical inventions, and having some education in private schools.

His family moved to America, arriving in New York in 1853.[2] There he engaged in menial jobs until moving in 1854 to Sheboygan, Wisconsin, where he became an apprentice in dentistry to Dr. Edwin M. Thorpe. Here he resumed his natural history collections, commencing correspondence with Spencer F. Baird of the Smithsonian Institution, as did so many amateur naturalists of his day (DALL, 1915).

After plans to study medicine in New York fell through, he traveled and collected extensively in several states, including Illinois, Indiana, Michigan, Missouri, and Pennsylvania. He settled in Ripon, Wisconsin, where he practiced dentistry. In 1861, he married Eunice Amelia Lake, the daughter of a Ripon College professor. His son Albert Edward was born there in 1862. The next year, the Yates family moved to Fond du Lac, Wisconsin, where his sons Walter Sidney and Frederick William were born in 1863 and 1864, respectively.

In November 1864, the family moved to California by way of Nicaragua, settling in Centerville[3] in Alameda County, now a district of Fremont. He set up a dental practice and engaged in natural history work in his spare time, including some collecting for the California Geological Survey. Sons George Owen and Gordin Ruskin were born in 1866 and 1873, respectively, as well as daughters Florence Rosetta in 1877 and Inez in 1878.

He made an exploratory trip to Santa Rosa Island in spring 1876 (YATES, 1876a).[4] Intrigued by the natural history of the Santa Barbara area and by its social scene, he moved there in November 1881, evidently separating from his wife ("she was all for religion and he all for science").[5] Yates continued both his dentistry and natural history studies in Santa Barbara. Rheumatism curtailed his dental practice by the turn of the century, and he

[1] His birthday is given as 12 January by CAMP (1963a, b), but the 8th is given in one account seen and presumably approved by Yates himself.

[2] The date of his arrival in the United States is given by CAMP (1963a, b) as 1851, but is given as 1853 in the account seen by Yates.

[3] In Yates' day, this was spelled "Centreville," as it is here in the Literature Cited for the tracts and catalogues published during his residency there. (The date he moved there is given in one source as 1863, but this seems to be in error.)

[4] Yates' diary of the Santa Rosa Island expedition, which was sponsored by the Smithsonian Institution, is archived in the Santa Barbara Historical Society.

[5] From holographic biographical notes by his second wife, now on deposit in the archives of the Santa Barbara Museum of Natural History. His first wife died on 20 February 1898, after a separation of over 17 years.

Figure 1

Lorenzo Gordin Yates, in his Santa Barbara herbarium. Courtesy of the Santa Barbara Historical Society.

endeavored to make a living in natural history by selling specimens and writing articles. He worked on the collections of the Golden Gate Park Museum in San Francisco, forerunner of the DeYoung Museum, for two years in about 1900.[6]

In August 1908, Yates married his widowed dental assistant, Mary Merill Isabella Childs. Five months later, on 31 January 1909, he died in Santa Barbara at the age of 72.

Camp (1963a, b) discussed Yates' contributions to various fields, including anthropology, archaeology, botany, geology, and vertebrate paleontology. Yates corresponded with scientists throughout the world and was a member of many organizations.

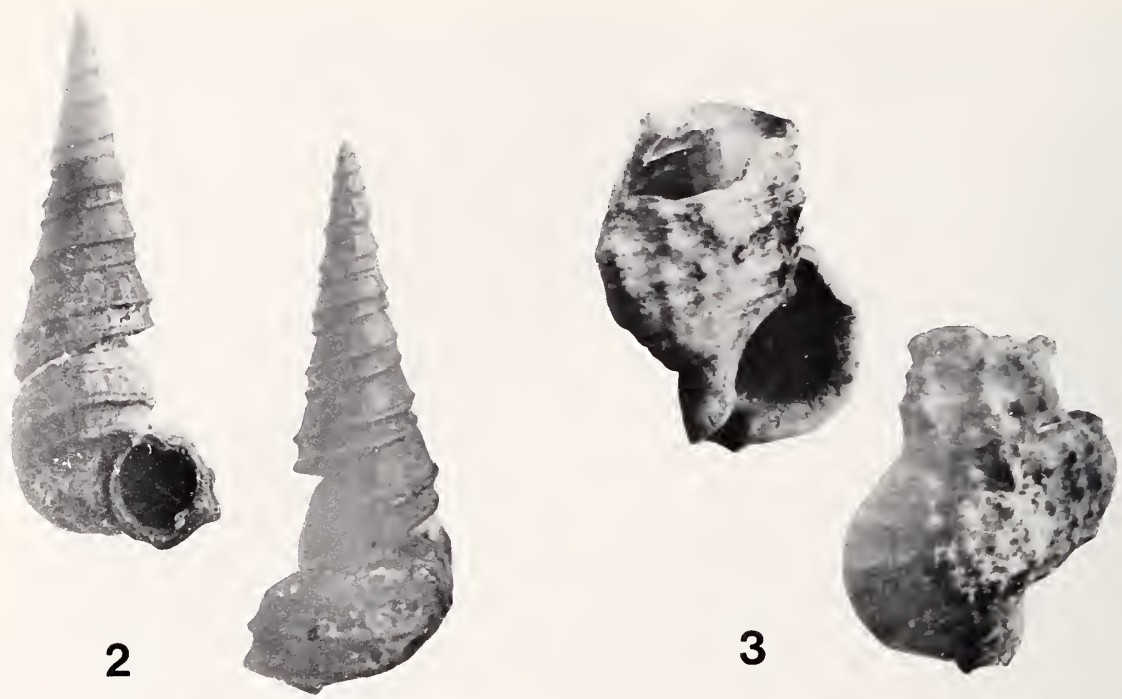
One of Yates' chief interests was malacology, and he amassed large collections of Recent and fossil mollusks. He issued a number of sales catalogs of his material, and he wrote articles on malacological topics, including faunal lists for the Santa Barbara area and descriptions of a few new species.

In the summer of 1872, he sold a substantial part of his mollusk collection to Wabash College in Indiana for $3000. This institution retains an inventory of the shipment, but only a few specimens from Yates remain in the collection. Curators there believed that much of the material had been transferred to Earlham College, also in Indiana, in the 1950s (E. C. Williams, letter, 26 August 1988). However, this was evidently not the case (J. Iverson, letter, 1 October 1988), nor was the material acquired by the Field Museum in Chicago (G. A. Solem, letter, 3 February 1989), as others had thought.

Yates tried to interest various institutions in acquiring his natural history collections. Early in 1893, he loaned part of his shell collection to Stanford University, where it remained for seven years. In September 1893, he taught at the Froebel Institute in Los Angeles, taking some of his collections there. Later, he tried to interest Mills College in Oakland, California, in purchasing his collections for $30,000, but the college refused, as did the cities of Santa Cruz and Los Angeles. In the meanwhile, he sold many of his finest specimens.

In 1912, his widow loaned the collections to the Los Angeles County Museum of Natural History, where they remained for more than 20 years. Following her death in

[6] The natural history materials of the DeYoung Museum were turned over to the California Academy of Sciences when the museum came to specialize in art.



Explanation of Figures 2 and 3

Figure 2. *Vermicularia fewkesi* (Yates, 1890). Holotype of *Vermetus* (*Vermiculus*) *fewkesi*; height = 16 mm; now lost.

Figure 3. Holotype of *Cerithium* (*Vertagus*) *lordii* Yates, 1890; length about 14 mm; now lost.

1936, the collections ended up in the hands of Frank S. Van den Berg. He placed the material in storage in the basement of the Santa Barbara County Courthouse. The Recent mollusks were given by Van den Berg's estate to the Santa Barbara Museum of Natural History in 1948, and the fossil material was given to Santa Barbara State College, now the University of California at Santa Barbara. Much of the material deposited in the Santa Barbara Museum of Natural History was destroyed by fire in 1962.

LIST OF TAXA

The following list includes the taxa that Yates introduced. Each original combination is followed by the original reference (keyed to the Literature Cited). This is followed by type locality (notes in brackets provide additional data), information about type material, and remarks about current allocation. The Literature Cited provides references for Yates' taxa, but not for their senior synonyms; references for his catalogs and papers with material on mollusks not containing new taxa are also included. The following abbreviations are used below:

ANSP—Academy of Natural Sciences, Philadelphia;
SBMNH—Santa Barbara Museum of Natural History;
UCSB—University of California, Santa Barbara, Department of Geology.

alamedense, Pinna—YATES, 1887:[?] [sic, for *alamedensis*]. See also Yates *in* COOPER, 1888:259; COOPER, 1894: 56; pl. 4, fig. 53.

Alameda Creek, Alameda Co., Calif.; in a sandstone boulder; [San Pablo Group]; Miocene.

Type material: UCSB Y474, holotype, pair.

Remarks: This species has generally been dated from Yates *in* COOPER (1888), but it was made available a year earlier in a newspaper account of a meeting of the Santa Barbara Society of Natural History, which is reprinted here in the Appendix.[7]

Atrina alamedensis (Yates), according to MOORE (1983:80–81; pl. 23, fig. 3; pl. 27, figs. 1, 3).

fewkesi, Vermetus (*Vermiculus*)—YATES, 1890b:48; pl. 2, figs. 8, 9.

Near Ellwood, Santa Barbara Co., Calif.; A. E. Yates.

Type material: Lost. A photograph of the original specimen, from which the original line drawing was prepared, was encountered in this study stapled into a reprint of Yates' paper, and it is reproduced here (Figure 2).

[7] This newspaper article and others listed in the Literature Cited are in Yates's scrapbook in The Bancroft Library. We have been unable to find the relevant issues of the newspapers in microfilm archives.

Remarks: *Vermicularia fewkesi* (Yates), according to McLean (1978:30–31; fig. 15.2).

fordii, Venus—Yates, 1890b:46; pl. 1, figs. 1–5.
Santa Barbara Channel; evidently several specimens.
Type material: SBMNH 22900, lectotype (Scott *et al.*, 1990:16; fig. 3).
Remarks: *Globivenus fordii* (Yates, 1890).

indioensis, Helix (*Arionta*) *carpenteri*—Yates, 1890e:63.
Near Indio, San Bernardino [Riverside] Co., Calif.; S. Bowers. Among granite talus, on S side of the valley (Yates, 1890c:52).
Type material: ANSP 62145, lectotype (Baker, 1962: 11); ANSP 77887, SBMNH 03705, paralectotypes.
Remarks: *Eremarionta indioensis* (Yates), according to Bequaert & Miller (1973:109). Figured in Pilsbry (1939:246–247; figs. 125c, f) in *Micrarionta* (*Eremarionta*).

lordii, Cerithium (*Vertagus*)—Yates, 1890b:46–47; pl. 2, figs. 6, 7.
Near Ellwood, Santa Barbara Co., Calif.; in a kelp holdfast; A. E. Yates.
Type material: Lost. A photograph of the original specimen, from which the original line drawing was based, was encountered in this study stapled into a reprint of Yates' paper, and it is reproduced here (Figure 3).
Remarks: This species remains a mystery. Nothing like it has ever been collected again, and no similar species are reported in deposits of Pliocene or Pleistocene age in southern California. Grant & Gale (1931:758) suggested that it was similar to what is now called *Rhinoclavis* (*Ochetoclava*) *gemmata* (Hinds, 1844); however, Houbrick (1978:20, and letter, 18 October 1988) doubts this. There is some resemblance to *Cerithium* (*Thericium*) *nicaraguense* Pilsbry & Lowe, 1932, but that species has a smaller shell with a more oblique anterior canal, and it occurs only as far north as Nicaragua. We suspect that Yates' specimen was brought with ballast from another province.

Mitricaria—Yates, 1885c:53.
Type species: *M. conica* (Schumacher, 1817); monotypy; =*Imbricaria conica* Schumacher, 1817; =*Mitra conularis* Lamarck, 1811.
Remarks: Synonym of *Imbricaria* Schumacher, 1817.

venturense, Pinna—Yates, 1887:[?] [sic, for *venturensis*]. See also Yates, *in* Cooper, 1888:259; Cooper, 1894: 56; pl. 5, fig. 54.
Casitas Pass, Ventura Co., Calif.; "Pliocene" [Vaqueros Fm.; Oligocene or Miocene]; several specimens.
Type material: UCSB Y3096, lectotype (Moore, 1983: 80, as "holotype"). Remarks: As with *Pinna alamedensis*, this species was first made available in a newspaper account of a meeting of the Santa Barbara Society of Natural History.[7]

Atrina venturensis (Yates), according to Moore (1983:80; pl. 23, fig. 2; pl. 27, fig. 2).

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